

# UCLA CEE 141: Structural Steel Design

Fall 2018

## Class Project Assignment



Westwood Blvd.  
Los Angeles, CA 90024

## MEMO

Date: November 27, 2018

To: CE 141 Student Engineering Firms

From: Susie Bruin, AIA, Principal Architect

Re: West Coast Office Headquarters for Yoogle  
Increment 5: Connection Design Submittal Requirements

Please fulfill the following requirements for Increment 5 of the project. Increment 5 is to be included in the final project submittal, due Friday, December 7, 2018 at 6 pm.

- Design the following connections. You may take advantage of the tables in Part 10 of the Steel Construction Manual and need not show each separate check by hand (i.e. Shear Yield, Shear Rupture, Block Shear, etc). A representative beam-to-girder cope check is still required:
  - o Most heavily loaded beam to girder connection at roof level
  - o Most heavily loaded beam to girder connection at an office floor level
  - o Most heavily loaded girder to column connection at an office floor level
- Draw a detail for each of the designed connections on Sheet S4.0 of your drawings
  - o Draw the connections to scale
  - o Clearly indicate the sizes and grades of all plates
  - o Clearly indicate the size, grade, spacing and edge distance for all bolts
  - o Call out all welds using AWS symbols
- Submit your design calculations
  - o Indicate which beam or girder is being designed for by referencing the designation used in the beam design calculations (e.g. Roof B1, Floor B2, Floor G1, etc.)
- Complete the General Notes on Sheet S1.0
  - o Refer to the Project Overview Letter for requirements.

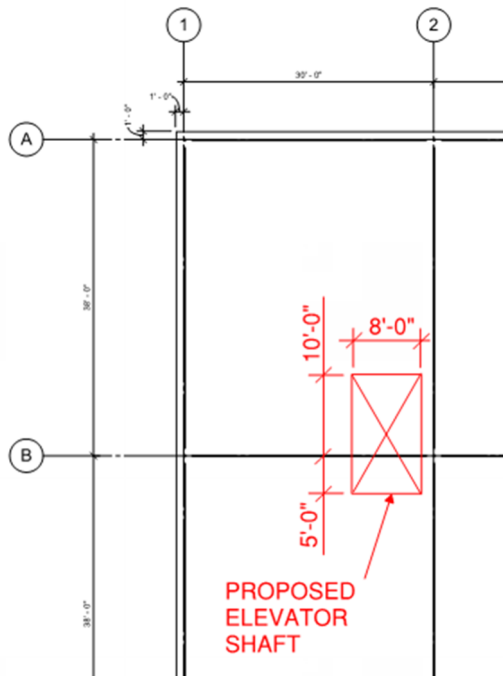
(Continued on Next Page)

# UCLA CEE 141: Structural Steel Design

Fall 2018

## Class Project Assignment

- We, UCLA Architects, are proposing to locate an elevator shaft as shown below.
  - We are requesting your help in developing a framing scheme for this opening. You need not size the members or connections for this scheme, only submit a proposed framing layout.
  - Do you have any feedback for us for a better location for this elevator shaft?
  - As the available budget for this elevator is still being evaluated, we do not want to show it on our final plans yet. Please submit this as a sketch separate from your main drawing submittal.



Note that the drawings and calculations for this Increment are not to be presented separately, but are to be included in the overall drawings and calculation package submitted for the final project. Refer to the example drawings provided for examples of connection details and general notes. Also make sure that all requirements in the Project Overview Letter are fulfilled in the final project submittal!